

Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently amended) A radiation detector comprising:

an active matrix board including gate lines and data lines arranged in a two-dimensional lattice shape, a plurality of high-speed switching elements provided at respective lattice points and connected to the gate lines and the data lines, each switching element being formed of a polycrystalline silicon thin film transistor and having a source electrode, pixel electrodes connected to the source electrodes of the high-speed switching elements, and charge storage capacitances, each being disposed between the pixel electrode and a ground electrode; and

a converting layer, formed on the pixel electrodes, to generate a pair of ~~electron-hole~~ electron-holes by absorbing ~~one of light and~~ radiation, said converting layer being formed of a vapor-deposited polycrystalline film of CdTe or CdZnTe.

2-3. (Canceled)

4. (Currently amended) A radiation detector according to claim 1, wherein said active matrix board further includes a base plate having high heat resistance and insulating ~~property~~ properties, an insulating film disposed on the base plate and sandwiched by the gate lines and data lines, an insulating protective layer disposed on the insulating film above the switching element, and a common electrode disposed on the converting layer.

5. (Previously presented) A radiation detector according to claim 4, further comprising a gate driving circuit to be connected to the gate lines, a signal reading circuit to be connected to the data lines, and a signal process circuit formed on the active matrix board for connecting the gate lines and data lines to the gate driving circuit and the signal reading circuit.

6. (Canceled)

7. (Currently amended) A radiation detector comprising:

an active matrix board including gate lines and data lines arranged in a two-dimensional lattice shap, a plurality of high-speed switching elements provided at respective lattice points and connected to the gate lines and the data lines, each switching element being formed of a polycrystalline silicon thin film transistor with a heat resistant temperature of more than 300°C and having a source electrode, pixel electrodes connected to the source electrodes of the high-speed switching elements, and charge storage capacitances, each being disposed between the pixel electrode and a ground electrode; and

a converting layer, formed on the pixel electrodes, to generate a pair of ~~electron-hole~~ electron-holes by absorbing ~~one of light and~~ radiation, said converting layer being ~~formed of~~ a vapor-deposited polycrystalline film of CdTe or CdZnTe having a film-forming temperature higher than 300°C.